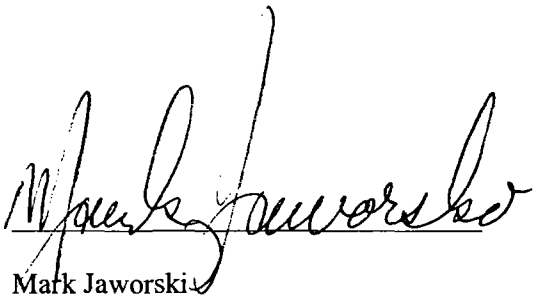
IDEM. Affadavit of Mark Jaworski, Summary of Site Investigation Activities conducted at the Lane Street Ground Water Contamination, December 3, 2008.

I, Mark Jaworski, attest that the following information regarding the Site investigation activities at Lane Street Ground Water Contamination located in Elkhart, Indiana is a true and accurate history of events. The events and information listed in the following narrative all occurred in my presence.



12-3-08

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Date

On August 23, 2007, IDEM staff conducted work for a PreCERCLIS Screening under CERCLA. Staff collected eight (8) ground water samples from residential wells and one facility private well. This work was completed to determine if TCE was truly detected above MCLs in residential drinking water. Sample results from the August 23, 2007 sampling event revealed elevated levels of TCE above MCLs for all of the residents sampled. On August 30, 2007, IDEM staff conducted another sampling event. This work was performed for a Preliminary Assessment (PA) under CERCLA. A total of 39 ground water samples were collected for this second phase of the investigation. The purpose of the sampling was to determine the number of private drinking water wells that were impacted with elevated levels of TCE. After reviewing nearby geologic investigations, it was determined that ground water flow was from a north to a southern direction. Therefore, several ground water samples were also obtained north of the Lane Street residential area in an attempt to locate the source(s) of the TCE plume. Work conducted to complete a PA usually does not involve sampling. The collection of thirty nine ground water samples is an activity conducive to performing a Site Inspection under CERCLA.

After the reviewing the sampling results from the PreCERCLIS Screening and the PA, EPA granted approval for IDEM staff to conduct the Site Inspection under CERCLA. The SI sampling was conducted from April 14 through 17. As stated in the workplan for the SI, the project objective was to verify the presence of TCE in the drinking water of residential and commercial wells and make an effort to determine the source of TCE ground water contamination The approved work plan stated that 112 ground water samples and eight (8) soil samples (source samples) would be obtained.

The work plan was drafted using the triad approach. The triad approach attempts to use systematic planning, dynamic work strategies, and real time measurements to compress mitigation and cleanup actions. The triad approach was developed by EPA to streamline investigations and cleanups.

To conduct the sampling activity described in the work plan using the triad approach, IDEM staff employed the use of two (2) direct push devices to obtain ground water and subsurface soil. One direct push device was operated by IDEM staff and the other was operated by U.S. EPA staff.

A portable gas chromatograph, (GC) operated by an IDEM chemist, was also utilized. IDEM staff used the GC instrument for screening of groundwater samples. The instrument provide 'realtime' qualitative screening results. This allowed for the expedited investigation of the extent of contaminant plume without having to wait for laboratory results and provide a qualitative scale for comparison of contaminated samples. The portable GC was capable of screening for volatile contaminants in the gaseous phase. Through the use of the internal separation column(s) and comparison with established retention time calibration data, it was possible to both identify the contaminants present and to establish a relative concentration of the contaminant in the gaseous sample.

In addition to IDEM's portable GC screening activities, Techlaw's Environmental Sampling Assistance Team (ESAT) was tasked to operate their mobile laboratory as part of their Field Analytical Support Program (FASP) Task Order, under the Superfund program. ESAT are contractors to EPA, Region 5. While onsite, ESAT analyzed water and soil samples in their mobile laboratory using a gas chromatograph with a mass spectrometer (GC/MS) in order to provide both qualitative identification and quantitative data for volatile organic compounds on a rapid turn around time. They provided two chemists for full time analysis in support of this operation

The ground water samples were screened in the field from the two onsite laboratories and the results were used by IDEM geologists to assist with the determination of the next sample location. Sample locations were based on the levels and presence of contamination in the screening samples and the direction of ground water flow. Samples were also positioned to establish the width of the Lane Street contaminant plume that is impacting the private residential wells on Lane Street.

Utilizing both direct push devices, ground water samples were generally collected from depths of 8 ft, 18 ft, and 30 ft below the ground surface (corresponding to the depth of the water table).

Since two onsite screening laboratories were used to screen samples for chlorinated VOCs prior to EPA Contract Laboratory analysis, IDEM staff obtained three separate volumes (nine 40 ml vials) of each sample; one for each of the two onsite screening laboratories and one for EPA's Contract Laboratory Program.

With the use of the direct push devices, three piezometers (temporary monitoring wells) were installed at sample locations E2PY0, E2PX3, and E2PX6. Staff were able to construct a potentiometric surface map and determine more precise ground water flow direction in the immediate area of Lane Street was in a southwesterly direction. This allowed staff to search for the source area(s) north to north west of Lane Street.

Eleven (11) soil samples were collected at the site using direct push methods.

Concurrent with the direct push investigation, water samples were also collected from private wells owned by residents and businesses in the vicinity of the Lane Street Ground Water Contamination site.

Using the quick turnaround made possible by the two onsite laboratories, field staff made good progress following the ground water plume upgradient. After the collection of the original 112 ground water samples (which included resident wells, permanent facility wells, and from the direct push devices at discrete subsurface locations), the data from the onsite laboratories indicated that the source of the plume could not yet be identified. As a result, while IDEM staff was mobilized, staff requested an additional twenty (20) ground water samples in a **final** attempt to locate a source for the ground water contamination. Approval from CLP and EPA was given to collect the additional ground water samples.

With the addition of twenty (20) ground water samples, a total of 132 ground water samples were collected. Ground water analysis conducted by the two onsite laboratories still indicated that elevated levels of VOCs were being detected in a northernly direction and that a source area could not be identified.

As part of the SI sampling event, IDEM staff conducted reconnaissance inspections at fourteen (14) businesses. The businesses were located north (upgradient) of Lane Street. These businesses were located in an area bounded to the south by County Road 106, to the east by Marina Drive, to the north by Cooper Drive, and to the west by Ada Drive. The purposes of the inspections was to locate potential sources for the ground water plume (Ref. 3, pp. 015, 016, 017, 019).

The following instruments and people were utilized to conduct the sampling of this SI sampling event:
two direct push devices
two onsite laboratories
Twenty (20) IDEM staff (at 12 to 16 hour work days for 4 days)
Four (4) EPA staff
Five (5) Elkhart City/County staff
Three (3) ESAT (EPA Contractor) staff

On September 17, 18, and 19, 2008, IDEM staff conducted additional reconnaissance visits at businesses located north of Lane Street. The purpose of the site visits was to continue the effort to identify potential source areas for the Lane Street Contamination.